IN THE CLAIMS:

1. (Previously amended) A process for primer coating of steel which is intended to be fabricated and overcoated, in which process the steel is primer coated with a primer coating comprising a silica binder, wherein the binder comprises an aqueous silica sol having a SiO_2/M_2O mole ratio, where M represents total alkali metal and ammonium ions, of at least 6:1, and that after the primer coating has dried to the extent that it is touch dry it is treated with a film strengthening solution.

2. (Previously amended) A process according to claim 1 wherein the touch dry primer coating is sprayed with the film strengthening solution.

3. (Previously amended) A process according to claim 1 wherein the SiO_2/M_2O mole ratio is at least 25:1.

4. (Previously amended) A process according to claim 1 wherein the binder comprises an aqueous solution stabilized by a siliconate substituted by at least one anionic group of lower pKa than silicic acid, having a pH of 7 to 10.5 prepared by lowering the pH of a solution of silicate and siliconate by ion exchange.

5. (Previously amended) A process according to claim 1 wherein the primer coating further comprises zinc powder and/or a zinc alloy.

6. (Previously amended) A process according to claim 1 wherein the primer coating further comprises an organic resin.

7. (Previously amended) A process according to claim 1 wherein all components of the coating composition are added and thoroughly mixed shortly before application.

8. (Previously amended) A process according to claim 1 wherein the touch dry primer coating is treated with a solution of a silicate or alkoxysilane.

9. (Previously amended) A process according to claim 1 wherein the solution is applied to the touch dry primer coated steel at 0.005-0.2 liters per square meter primer coated surface.

10. (Previously amended) A process according to claim 1 wherein the touch dry primer coating is treated with an aqueous solution of an inorganic salt of concentration at least 0.01M.

11. (Previously amended) A process according to claim 1 wherein the primer coating of the steel, drying of the primer coating until it is touch dry and application of the treatment solution are carried out successively in an on-line process.

12. (Previously amended) A process according to claim 1 wherein the primer coating is dried at a temperature of 10 - 60°C in a forced air flow.

13. (Previously amended) A method of using an aqueous solution of an inorganic salt of concentration at least 0.01M as a spray treatment of steel primer coated with a primer coating comprising an aqueous silica sol binder having a SiO_2/M_2O mole ratio, where M represents total alkali metal and ammonium ions, of at least 6:1.

14. (Previously amended) A method of using a silicate or alkoxysilane solution as a spray treatment of steel primer coated with a primer coating comprising an aqueous silica sol binder having a SiO_2/M_2O mole ratio, where M represents total alkali metal and ammonium ions, of at least 6:1.

15. (Previously added) A process according to claim 1 wherein the binder further comprises an alkali metal silicate.

16. (Previously added) A method according to claim 13 wherein the binder further comprises an alkali metal silicate.

17. (Previously added) A method according to claim 14 wherein the binder further comprises an alkali metal silicate.

18. (New) A process for primer coating of steel comprising:

coating the steel with a primer coating comprising a silica binder and zinc powder and/or a zinc alloy, wherein the binder comprises an aqueous silica sol having a particle size in the range 3 to 100 nm and having a SiO_2/M_2O mole ratio, where M represents total alkali metal and ammonium ions, of at least 25:1; and

after the primer coating has dried to the extent that it is touch dry, treating it with a film strengthening solution.

19. (New) A process for primer coating of steel comprising:

coating the steel with a primer coating comprising a silica binder and zinc powder and/or a zinc alloy, wherein the binder comprises an aqueous silica sol having a particle size in the range 3 to 100 nm and having a SiO_2/M_2O mole ratio, where M represents total alkali metal and ammonium ions, of at least 25:1; and

spraying an aqueous solution of an inorganic salt having a concentration of at least 0.01M on the steel coated with the primer coating.

20. (New) A process for primer coating of steel comprising:

coating the steel with a primer coating comprising a silica binder and zinc powder and/or a zinc alloy, wherein the binder comprises an aqueous silica sol having a particle size in the range 3 to 100 nm and having a SiO_2/M_2O mole ratio, where M represents total alkali metal and ammonium ions, of at least 25:1; and

spraying a silicate or alkoxysilane solution on the steel coated with the primer coating.